



# INSTALLATION AND MAINTENANCE INSTRUCTIONS

## PREMIUM BIOMASS CHIMNEY GENERAL ASSEMBLY INSTRUCTIONS:



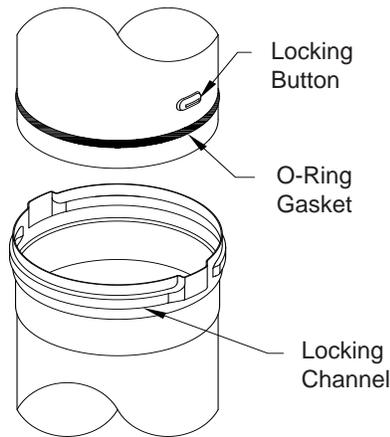
Lising No. MH16402

Tested to UL 641

### General Installation Notes:

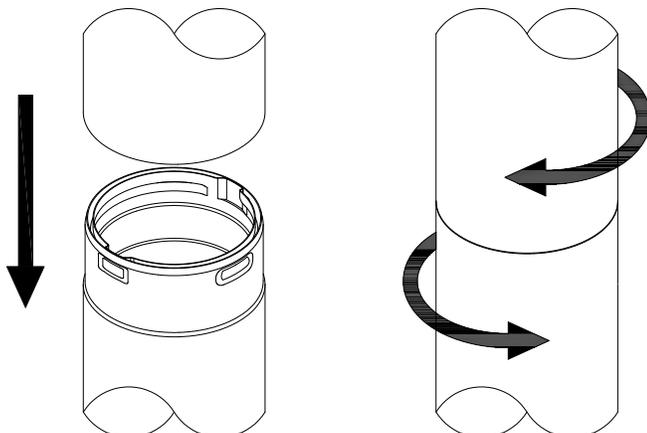
1. Premium Biomass chimney is assembled using an internal twist lock and sealed with an internal O-ring gasket.

**Note:**  
Casing not shown in figure. Inner pipe performs the locking function.



2. Premium Biomass parts are provided with a lubricated o-ring gasket. If the gasket is missing or damaged, replace and lubricate the new o-ring gasket. Only use replacement o-ring gaskets and lubricant provided by Metal-Fab.
3. Additional sealant is not required for pipe joints, but can be used if desired.
4. Sealant is required to install Adjustable Lengths and Appliance Adapters. **Use a silicone-type sealant rated for use at 400°F or higher.**
5. Connect joint by first aligning the pipe. Twist pipe until locking button aligns with locking channel. Push joints fully together then twist to lock (**min. 30 degrees**) as shown below.

**Note:** If fly ash leakage occurs, seal casing joints.



6. Screws are not required to secure the twist lock joint together. If screws are desired, use 1/4" long sheet metal screws only. **DO NOT PENETRATE INNER FLUE WITH SCREWS.**

### 7. Adjustable Length Installation:

Apply high temp sealant to flue of adjoining section to prevent fly ash leaks. Slide Adjustable Length over section to desired insertion length. Secure Adjustable Length with three (3) 1/4" long sheet metal screws using the pre-drilled holes in outer sleeve.

8. Metal-Fab Premium Biomass chimney (vent) and fittings are intended for installation to form a continuous passageway from either above the roof or horizontally through the wall, including the chimney cap. To comply with UL listings and Metal-Fab warranty, use only chimney parts defined by these instructions or Metal-Fab brochure.
9. Metal-Fab Premium Biomass chimney and fittings are approved for venting listed pellet stoves and gas and oil furnaces that do not exceed 570°F at the outlet temperature.
10. A Metal-Fab chimney cap should be used on all installations, either horizontal or vertical, to prevent back drafts and to keep out rain and debris.
11. To increase Premium Biomass chimney life, coat all exterior metals with high temperature, rust proof paint, particularly in areas near the ocean.
12. Inspect each part for damage, before installing.
13. Maintain a 1" minimum clearance to combustibles when passing through a combustible ceiling or roof (3" minimum for combustible wall). Always use a Firestop when penetrating a floor or ceiling.

**Note:** Combustible materials include: materials made of or surfaced with wood, compressed paper, plant fibers, plastics or other material that will ignite and burn. Such material is considered combustible even though flame proofed, fire retardant or plastered.

14. When horizontally vented, maintain a clearance of 48" from doors, windows and public walkways.
15. An increaser may be used at any point in the chimney system to meet stove manufacturer's requirements.
16. Before installing, consider the design and construction of the building so as to minimize the need to pass through existing structural supports.
17. The maximum height of the Premium Biomass chimney should not exceed 60 feet. A support is required at 30 feet.
18. Elbow joints are designed to fit tight and are not adjustable. All direction changes must be made at 45° or 90°.

**Installation Instructions**

**Direct Horizontal Venting (See FIG. 1A & FIG. 1B)**

1. Attach and secure the Stove Adapter to the appliance flue outlet. Sheet metal screws may be used to secure the Stove Adapter to the appliance flue outlet.

**Note:** Seal adapter as needed using a sealant rated for 400°F or higher.

2. On the same center line as the appliance outlet, cut a hole into the outside wall. Hole size should be per **TABLE 1**. Caution is needed to assure no wires or pipes within the wall are damaged.

TABLE 1	
PIPE DIA.	REQ'D OPENING
3"	6-1/2" X 6-1/2"
4"	7-1/2" X 7-1/2"

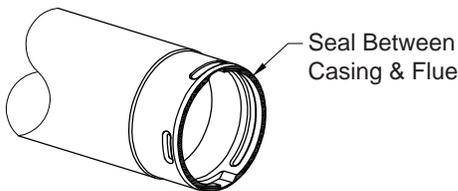
3. Install the Wall Thimble by inserting the larger of the two parts on the appliance side and the other half through the outside wall.

**Note:** The two horizontal cylinders of the Thimble must engage a minimum of 2".

4. Install the Premium Biomass chimney sections to allow 3" clearance to exterior of building.
5. It is recommended that a House Shield be used to keep pellet ash from forming on the exterior of the building. If used, secure the shield to the wall using the supplied screws.
6. **Prior to installing horizontal cap, seal gap between casing and flue of chimney end (See Fig. 1A).**

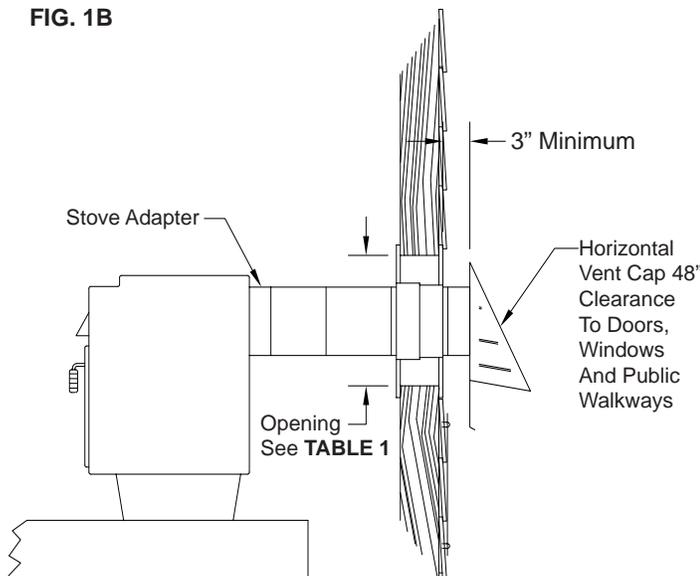
**Note:** Use sealant rated for 400°F or higher.

**FIG. 1A**



7. Install the Horizontal Chimney Cap by positioning the Cap over the chimney end and secure by tightening the 2 bolts and nuts.

**FIG. 1B**



**Rear Stove Exhaust, with Exterior Venting (See FIG. 2)**

1. Begin installation by following Steps 1 through 3 for direct horizontal venting.
2. Install the Tee to the chimney. Attach a Wall Band/Tee Support just above the Tee.

**Note:** A minimum of 1" clearance to combustibles exterior surface is required.

**WARNING:** DO NOT ENCLOSE TEE AT 1" CLEARANCE TO COMBUSTIBLES.

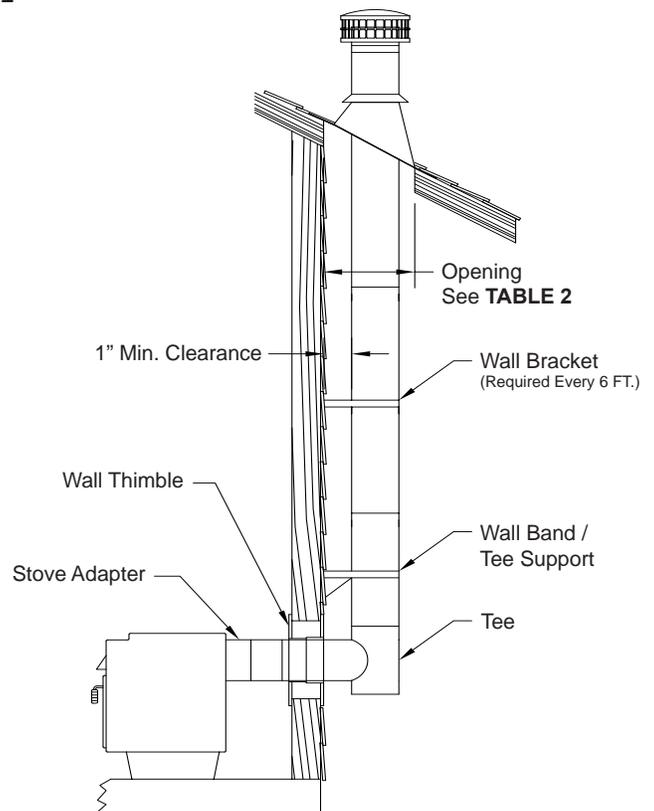
3. Install chimney sections vertically, starting at the Tee outlet. Attach a Wall Bracket approximately every 6 feet to secure the vent.
4. If chimney is to pass through the roof or overhang (see FIG 2), cut a hole per TABLE 2.

TABLE 2	
PIPE DIA.	REQ'D OPENING
3"	5-1/2" X 5-1/2"
4"	6-1/2" X 6-1/2"

5. Slide the flashing over the pipe and secure to roof. Apply mastic tape where chimney passes through flashing. Apply a thick ring of mastic around the chimney. Slide the Storm Collar down into the mastic ring and secure (See FIG. 8).
6. Install any additional chimney sections terminating at the Chimney Cap. See FIG. 8 and 9 for minimum height above the roof.

**Note:** Install metal shielding (26 gauge min.) for roof penetrations that contain insulation in order to maintain a minimum 1" clearance from outer vent casing.

**FIG. 2**



### Rear Stove Exhaust, With Interior Venting (See FIG. 3)

1. When installing the chimney from the rear outlet, a minimum of 1" clearance to combustibles is required.
2. Attach and secure the Stove Adapter to the appliance flue outlet. Sheet metal screws may be used to secure the Stove Adapter to the appliance flue outlet.

**Note:** Seal adapter as needed using a sealant rated for 400°F or higher.

3. It is recommended that a Tee be used to transition to vertical venting for ease of clean out and inspection.
4. Mark on ceiling the vertical centerline of the chimney. A plumb bob is normally used to locate the centerline.
5. Cut a 14-1/2" square hole through ceiling.

**Note:** When passing through a ceiling, it is recommended that the hole be framed. Use the same size joists as are present.

6. On the ceiling side, install Firestop spacer.

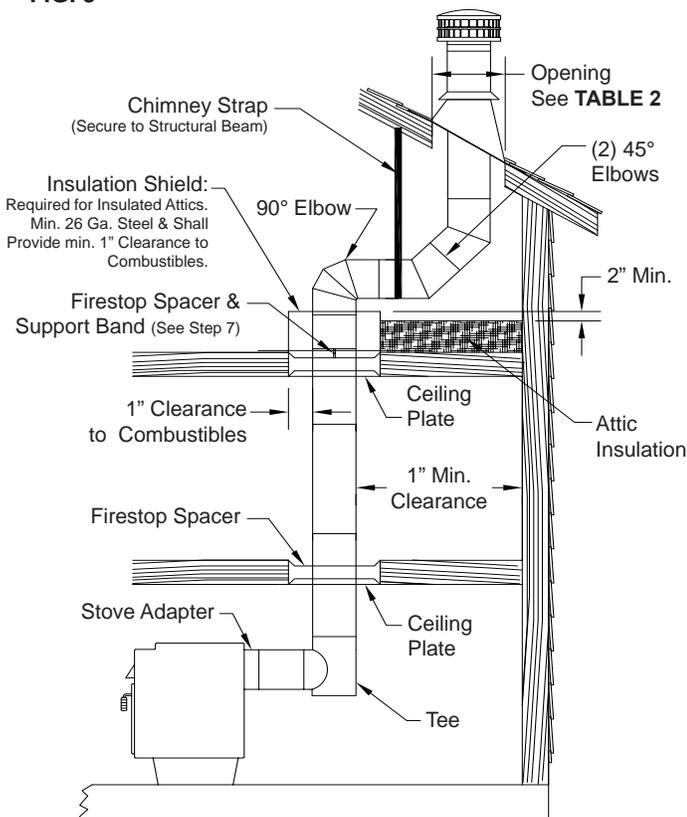
**Note:** If attic is directly above, install Firestop spacer from attic side.

7. Continue the chimney installation into the attic through the Firestop. Slip the Support Band over the pipe with flange of the Band resting on the Firestop plate. Tighten the Band around the chimney using the two (2) bolts and nuts provided.
8. If elbows are needed to position the chimney away from obstructions, support the offset using chimney straps (plumber's straps) as shown in FIG 3.

**Note:** Chimney strap - Use min. 3/4" wide plumber's strap (min. 24 ga. galvanized steel) with 1/8" or 1/4" holes capable of supporting 12 ft. or less of pipe.

9. Continue the installation by following Steps 4 through 6 for exterior venting.

FIG. 3



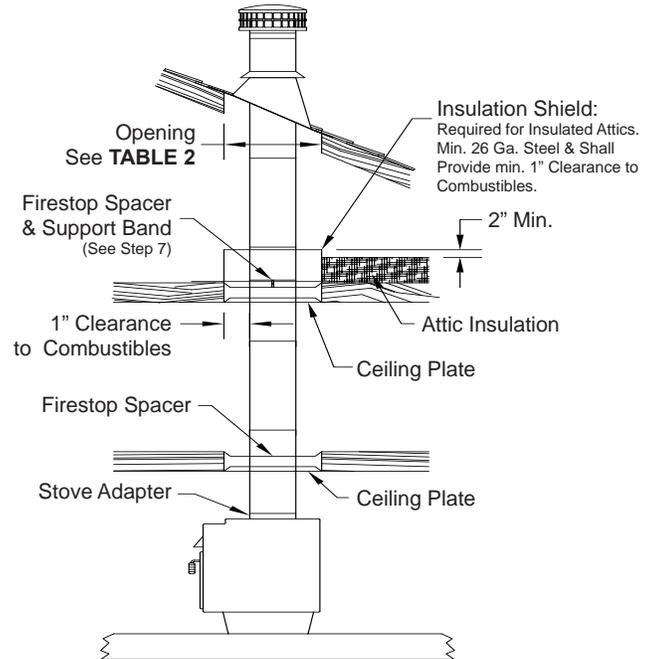
### Top Exhaust Venting (See FIG. 4)

1. Attach and secure the Adapter to the appliance flue outlet. Sheet metal screws may be used to secure the Stove Adapter to the appliance flue outlet.

**Note:** Seal adapter as needed using a sealant rated for 400°F or higher.

2. Install the chimney sections vertically, by following steps 4 through 9, of previous section "Rear Stove Exhaust, With Interior Venting".

FIG. 4

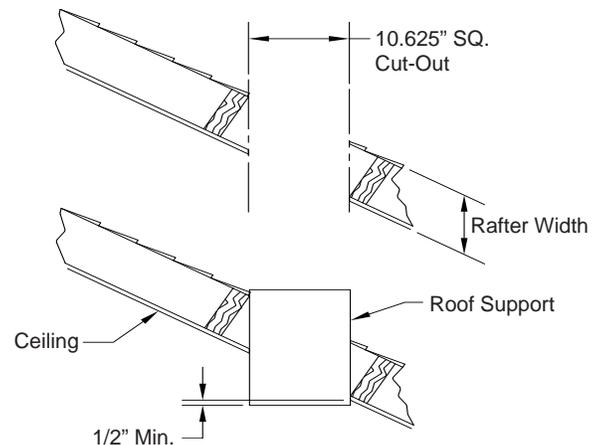


### PRS, Roof Support (See FIG. 5,6 & 7)

**Note:** Maximum roof pitch of 12/12. Maximum supported chimney by PRS support clamp is 30 feet.

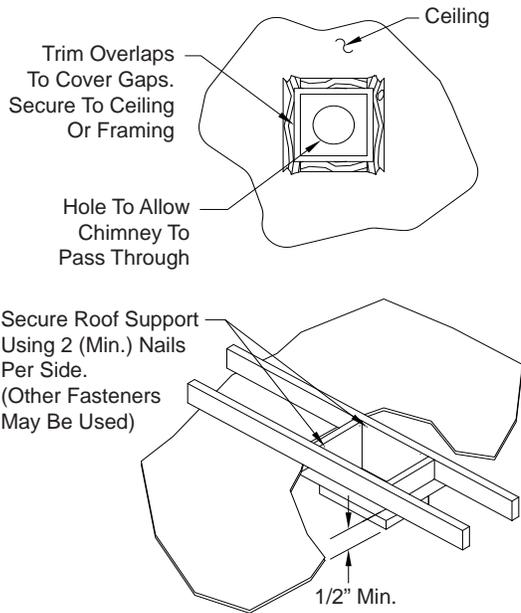
1. Select the location for roof penetration by the Premium Biomass stove chimney. Determine the roof pitch and the amount of exposed surface on the roof support. For allowance of trim at the ceiling, a 1/2 inch minimum protrusion of the roof support is required on the down slope of the pitched ceiling. For flat ceilings, a 1/2 inch minimum exposed roof support below the ceiling is recommended. Transfer this information to roof support using appropriate metal cutting equipment and cut the roof support (See FIG. 5).

FIG. 5 - Cutout On Roof Support



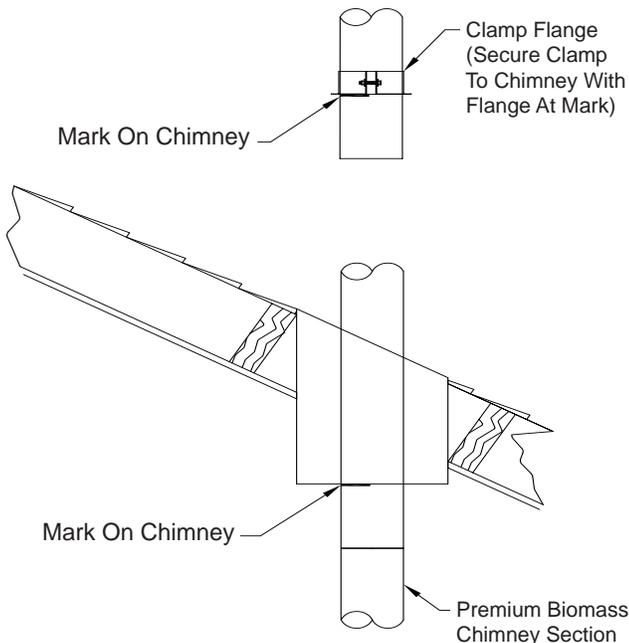
2. Insert the roof support and align the top surface with the roof. Temporarily secure the roof support with two (2) nails. Check to be sure the roof support aligns with chimney and has at least 1/2 inch exposed on the down slope of the ceiling. Permanently secure the roof support to the roof joist framing with a minimum of eight (8) No. 8D nails (See FIG. 6).

**FIG. 6 - Attaching Support and Trim**



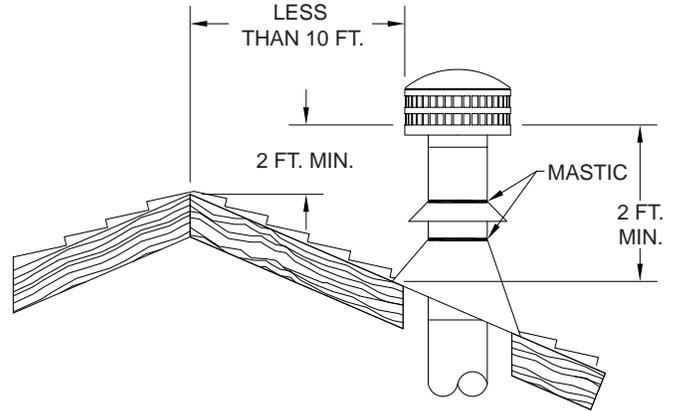
3. The slight gap between the roof support and the hole cut into the ceiling can be closed by applying the trim supplied with the roof support. Slide the C-shaped trim piece around the roof support and secure. The trim pieces are designed to overlap.
4. To support the Premium Biomass chimney from the roof support, use the supplied clamp. Mark the section of Premium Biomass chimney at the point where it goes through the hole in the roof support. Secure the clamp, within the roof support, at the mark. Reinstall the Premium Biomass chimney (See FIG. 7).

**FIG. 7 - Attaching Support Clamp**

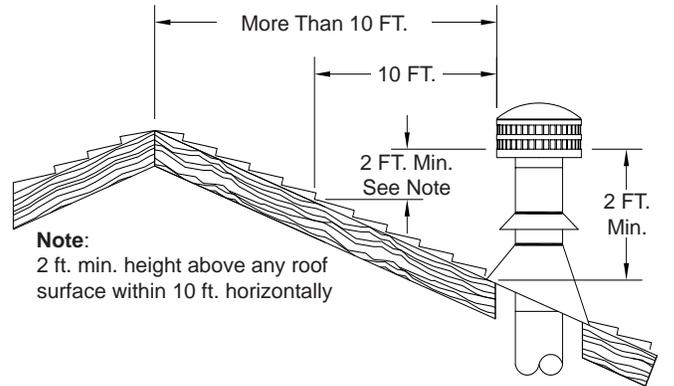


## Terminations

**FIG. 8 - Termination Less Than 10 Feet From Ridge, Wall or Parapit**



**FIG. 9 - Termination More Than 10 Feet From Ridge, Wall or Parapit**



## Maintenance Instructions

1. It is recommended that the chimney system be inspected and cleaned at least once each month during the heating season. Also, inspect and clean the chimney system before each heating season.
2. For cleaning and/or inspection of the Premium Biomass chimney, the Cap may be removed. To remove the vertical Cap, twist counter clockwise and pull straight off. To remove the horizontal Cap, loosen the nut on the retaining band and pull Cap off.



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